

Amendments to the Claims:

Claims 46-52, 58, 60, 62, and 63 have been amended herein. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-44 (Canceled)

45. (Previously Presented) A method of forming a gate stack, comprising:
forming a gate dielectric layer on a silicon substrate;
forming a doped polysilicon layer on the gate dielectric layer;
forming a metallic silicide film on the doped polysilicon layer; and
forming a silicon nitride layer on the metallic silicide film at a sufficiently low temperature to maintain the metallic silicide film in an amorphous state.

46. (Currently Amended) The method of claim 45, wherein forming a the metallic silicide film on the doped polysilicon layer comprises forming the metallic silicide film from a metal silicide selected from the group consisting of tungsten silicide, cobalt silicide, molybdenum silicide, and titanium silicide.

47. (Currently Amended) The method of claim 45, wherein forming a the metallic silicide film on the doped polysilicon layer comprises forming an amorphous metallic silicide film on the doped polysilicon layer.

48. (Currently Amended) The method of claim 45, wherein forming a the silicon nitride layer on the metallic silicide film at a sufficiently low temperature to maintain the metallic

silicide film in an amorphous state comprises forming the silicon nitride layer at a temperature below about 600°C.

49. (Currently Amended) The method of claim 45, wherein forming a the silicon nitride layer on the metallic silicide film at a sufficiently low temperature to maintain the metallic silicide film in an amorphous state comprises forming the silicon nitride layer at a temperature ranging from approximately 400°C to below approximately 600°C.

50. (Currently Amended) The method of claim 45, wherein forming a the silicon nitride layer on the metallic silicide film at a sufficiently low temperature to maintain the metallic silicide film in an amorphous state comprises forming the silicon nitride layer by chemical vapor deposition, sputtering, or a spin-on technique.

51. (Currently Amended) The method of claim 45, wherein forming a the silicon nitride layer on the metallic silicide film at a sufficiently low temperature to maintain the metallic silicide film in an amorphous state comprises forming the silicon nitride layer by plasma-enhanced chemical vapor deposition.

52. (Currently Amended) The method of claim 45, wherein forming a the silicon nitride layer on the metallic silicide film at a sufficiently low temperature to maintain the metallic silicide film in an amorphous state comprises forming the silicon nitride layer while preventing formation of at least one silicon cluster in the metallic silicide film.

53. (Previously Presented) The method of claim 45, further comprising:
forming and patterning a photoresist layer on the silicon nitride layer;
etching the silicon nitride layer, the metallic silicide film, and the doped polysilicon layer; and
removing the photoresist layer.

54. (Previously Presented) The method of claim 53, wherein the gate dielectric layer is substantially devoid of pitting.

55. (Previously Presented) A method of forming a gate stack, comprising:
forming a gate dielectric layer on a silicon substrate;
forming a doped polysilicon layer on the gate dielectric layer;
forming an amorphous metallic silicide film on the doped polysilicon layer;
forming a silicon nitride layer on the amorphous metallic silicide film;
forming at least one silicon cluster within the amorphous metallic silicide film; and
dispersing the at least one silicon cluster.

56. (Previously Presented) The method of claim 55, wherein forming at least one silicon cluster within the amorphous metallic silicide film comprises crystallizing the amorphous metallic silicide film.

57. (Previously Presented) The method of claim 55, wherein forming at least one silicon cluster within the amorphous metallic silicide film comprises exposing the amorphous metallic silicide film to at least one heat cycle.

58. (Currently Amended) The method of claim 55, wherein forming ~~an~~ the amorphous metallic silicide film on the doped polysilicon layer comprises forming the amorphous metallic silicide film from a metal silicide selected from the group consisting of tungsten silicide, cobalt silicide, molybdenum silicide, and titanium silicide.

59. (Previously Presented) The method of claim 55, wherein forming at least one silicon cluster within the amorphous metallic silicide film comprises at least one of annealing the amorphous metallic silicide film and forming the silicon nitride layer at a temperature greater than approximately 600°C.

60. (Currently Amended) The method of claim 55, wherein forming a the silicon nitride layer on the amorphous metallic silicide film comprises forming the silicon nitride layer at a temperature below about 600°C.

61. (Previously Presented) The method of claim 60, wherein forming at least one silicon cluster within the amorphous metallic silicide film comprises annealing the amorphous metallic silicide film.

62. (Currently Amended) The method of claim 60, wherein forming a the silicon nitride layer on the amorphous metallic silicide film comprises forming the silicon nitride layer by chemical vapor deposition, sputtering, or a spin-on technique.

63. (Currently Amended) The method of claim 60, wherein forming a the silicon nitride layer on the amorphous metallic silicide film comprises forming the silicon nitride layer by plasma-enhanced chemical vapor deposition.

64. (Previously Presented) The method of claim 55, further comprising:
forming and patterning a photoresist layer on the silicon nitride layer;
etching the silicon nitride layer, the amorphous metallic silicide film, and the doped polysilicon layer; and
removing the photoresist layer.